

## CREDIT OPINION

6 February 2017

Update

Rate this Research >>

### RATINGS

#### JAB Holding Company S.a r.l.

Domicile	Luxembourg
Long Term Rating	Baa1
Type	LT Issuer Rating - Fgn Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

### Contacts

Anke Rindermann 49-69-70730-788  
 Associate Managing  
 Director  
 anke.rindermann@moodys.com

Jeanine Arnold 49-69-70730-789  
 VP-Senior Analyst  
 jeanine.arnold@moodys.com

Taisiia Aliksieienko 49-69-70730-707  
 Associate Analyst  
 taisiia.aliksieienko@moodys.com

## JAB Holding Company S.a r.l.

### Credit Opinion Update Following Outlook Change to Stable

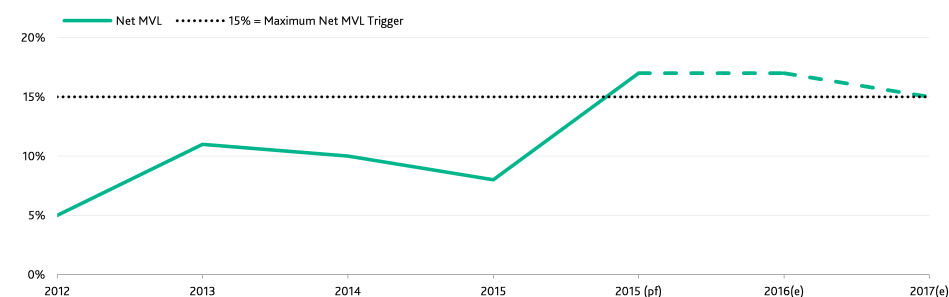
#### Summary Rating Rationale

[JAB Holding Company S.a r.l.'s](#) (JAB) Baa1 Issuer Rating reflects the company's clearly-defined and successful investment strategy to date, its conservative net market value leverage ("MVL") target of around 15% and an investment portfolio comprising cash-generative and typically defensive global consumer businesses. In our view this limits market value volatility, which is important given JAB's exposure to equity market risk.

JAB's consecutive and sizeable M&A activity over the last 12 to 24 months as well as M&A activity at the investment level, has led to a deterioration in credit metrics in excess of our rating triggers. As per the end of 2016 we expect net MVL to be in excess of 15% (but to remain below 20%) and for interest cover to be below 2.0x. This provides JAB with limited headroom at the current rating level. However, M&A activity has helped the company improve its asset diversification and broaden its diversification within the consumer products industry and in this context, we believe the slightly weaker than expected metrics is manageable in the near-term. JAB has also confirmed that its primary focus will be on the integration and further development of the existing assets until credit metrics have improved to levels more comfortably within our guidelines. Until such time we understand that JAB will not engage in any acquisitions requiring material equity contributions.

#### Exhibit 1

##### Development of JAB's Net MVL Since 2012



Source: Moody's Investor's Service

The outlook has been changed to stable from negative in the previous report dated 6 February 2017.

Liquidity is good as we expect available cash and undrawn credit facilities to be around €2 billion. This follows the company's refinancing of its RCF in November 2016 and the €500 million increase in the facility to €2.6 billion from €2.1 billion.

A possible acquisition by [Reckitt Benckiser Group plc](#) (Reckitt Benckiser, A1 RUR-Down; JAB's stake 8%) of [Mead Johnson Nutrition Co.](#) (Mead Johnson, Baa1 Developing) is likely to lead to an increase of leverage at Reckitt Benckiser. This is credit negative for JAB, given the lower credit quality of one of its main stakes, but we do not expect this to be sufficient enough to have an effect on JAB's rating. This is because Reckitt Benckiser is a financial asset and therefore JAB is more exposed to equity risk and the development of Reckitt Benckiser's share price rather than Reckitt Benckiser's credit risk. Preliminary expectations are that Reckitt will maintain a strong investment grade entity even post acquisition, and the equity value has not been diminished by the announcement of the bid.

## Credit Strengths

- » Clearly-defined and successful investment strategy as reflected in JAB's strong asset portfolio growth
- » Investments in defensive global consumer businesses limit market value volatility
- » Highly experienced and successful management team
- » Conservative net MVL target of around 15%, although leverage expected to remain in excess of this in the near-term
- » Good liquidity given cash and undrawn credit facilities of around €2 billion and long-term debt maturity profile

## Credit Challenges

- » Recent material and complex M&A activity means management will have to remain focused on supporting the integration and further development of its existing assets
- » Weak interest cover only gradually expected to increase to in excess of 2.0x
- » Long-term incentive plan for management with put features to some degree constitutes an event risk

## Rating Outlook

The stable outlook reflects our view that JAB's asset portfolio is strengthening and that reduced valuation risk associated with material M&A over the last 12-24 months should allow for greater stability of market values. We expect this, combined with the company's financial policy to maintain strong credit metrics, to support a net MVL of around 15% and improving interest cover metrics to in excess of 2.0x. In the context of JAB's strengthening asset portfolio JAB's net MVL may temporarily exceed 15%, but we would expect it to at least remain below 20%.

M&A forms the cornerstone of JAB's investment strategy and the risk is to some degree factored into the rating. But, the stable outlook assumes that i) JAB will not engage in any further material debt-funded acquisitions in the near term and ii) any M&A activity at the level of JAB's investments does not lead to a notable deterioration in market values or forecast dividend income.

A possible acquisition by Reckitt Benckiser of Mead Johnson is likely to lead to an increase of leverage at Reckitt Benckiser. This is credit negative for JAB, given the lower credit quality of one of its main stakes, but we do not expect this to be sufficient enough to have an effect on JAB's rating.

## Factors that Could Lead to an Upgrade

- » If credit metrics strengthen such that net MVL is more comfortably below 15% and interest cover rises more sustainably to around 3.0x.
- » A good balance in terms of its exposure towards its four key assets - Reckitt Benckiser; [Coty Inc.](#) (Ba1 stable); [JACOBS DOUWE EGBERTS Holdings B.V.](#) (JDE, Ba3 positive), and [Keurig Green Mountain, Inc.](#) (Keurig, Ba2 stable).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

- » We would expect Coty and [The Procter & Gamble Company's](#) (P&G, Aa3 stable) beauty business to be fully integrated and for there to be evidence of a further strengthening in JDE's, Keurig's and Coty's financial profiles. This should allow for more stable market values and dividend income more commensurate with an "A" rating.
- » We would also expect to have a clear understanding of JAB's investment strategy, including any additional significant M&A and IPOs to monetize assets, as well the company's expectations with regards to further debt issuances.

## Factors that Could Lead to a Downgrade

- » If credit metrics deteriorate such that JAB's net MVL significantly exceeds 15% and interest cover fails to rise to in excess of 2.0x. This would suggest a higher leverage than currently envisaged and/or an inability to receive cash from its investments.
- » If there is a material weakening in the company's liquidity, either in terms of (1) the proportion of its available listed assets; (2) cash and available credit facilities which fall below €500 million; and/or (3) weaker dividend income due to a deterioration in Reckitt Benckiser's and Coty's performance, a change in JAB's dividend policy or further material acquisitions.

## Key Indicators

Exhibit 2

[1] JAB Holding Company S.a r.l.	31/12/2012	31/12/2013	31/12/2014	31/12/2015	LTM Jun-16
Portfolio Assets Market Value Leverage	5%	11%	10%	8%	17%
(FFO + Interest Expense) / Interest Expense	3.4%	2.8x	2.8x	2.6x	1.8x

[1] All ratios are based on parent company financial statements.  
Source: Moody's Investors Service

## Detailed Rating Considerations

### Reduced valuation risk associated with the sizeable number of material M&A transactions over past 12-24 months

We consider there to be a lower level of valuation risk associated with the numerous and sizeable M&A transactions that JAB and its investments have undertaken over the last 12-24 months. This is important as it provides Moody's with more certainty that JAB will continue to maintain substantial headroom in terms of the overall value of its portfolio relative to debt raised – namely a net MVL of around 15%. A significant deterioration in market values had been a concern after a series of sizeable M&A transactions over the last 12-24 months, and in particular the sizeable premium, which was paid for the largely debt-funded acquisition of Keurig in December 2015.

The reduced valuation risk is mainly driven by the continued robust operating and cash flow performances of many of JAB's key investments, but especially Keurig over the last 12 months, including the three months to 31 December 2016 (Q1-17), Keurig's most important quarter given the Christmas period. In fact, Keurig's operating and cash flow performance has tracked ahead of Moody's expectations and we believe this now provides some justification for the material premium, which JAB paid for Keurig. Under the ownership of JAB, Keurig has been successful in expanding gross margins through productivity gains and boosting cash flow through working capital initiatives - a hallmark of JAB's operating and investment strategy. This has led to a significant deleveraging, which should also support its valuation. While there is no direct linkage between the credit ratings of JAB's investments, the upgrade of Keurig's rating to Ba2 stable from Ba3 stable within a year is testament to JAB's strategy and its execution – (see [Keurig Press Release - Jan 2017](#)).

Moody's also considers valuation risk to be lower as JAB successfully closed the highly complex merger between Coty and P&G's beauty business in October 2016. Coty's share price has fared less well over the last six months, partly because of the weaker than expected performance, especially from a topline perspective and the fact that synergies will take some time to be realized. But, over the medium to longer-term, we expect that the experience and proven track record of JAB's management should help support Coty's operating and cash flow performance, and ultimately its share price. In H1 2016 the valuation of JAB's stake in Acorn Holdings B.V. (unrated) increased by approx. €200 million which is assumed to be mainly related to a value increase of JDE, as the stake in Keurig was

still valued at acquisition cost. This is providing greater comfort that the merger of DEMB and [Mondelez International, Inc.](#)'s (Mondelez, Baa1 stable) coffee business will be value-enhancing.

JAB has also confirmed that its primary focus will be on the integration and further development of the existing assets until credit metrics have improved to levels more comfortably within our guidelines. Until such time we understand that JAB will not engage in any acquisitions requiring material equity contributions.

### Clearly-defined and successful investment strategy; Investments in defensive global consumer businesses

JAB's strategy is focused on long-term investments in companies with premium brands in the consumer goods and retail sector. Consumer goods and retail are sectors in which the company considers itself to have a strong working- knowledge as well as networking advantage. These are deemed less cyclical and more cash generative relative to other industries and they tend to benefit from product portfolio breadth and strong market positions. This all tends to limit the impact of customers switching products in a downturn, or changes in customer preference.

JAB acquires and integrates companies or brands in a particular sub-sector, as evidenced by its past acquisitions in household goods, cosmetics and coffee brands, with a view to listing these once operations have been sufficiently consolidated and optimised. Sales and cost synergies are achieved through R&D, factory scale and the development of distribution channels. Ultimately JAB intends to replicate the Reckitt Benckiser success story in cosmetics via Coty as well as in coffee and tea via JDE and Keurig.

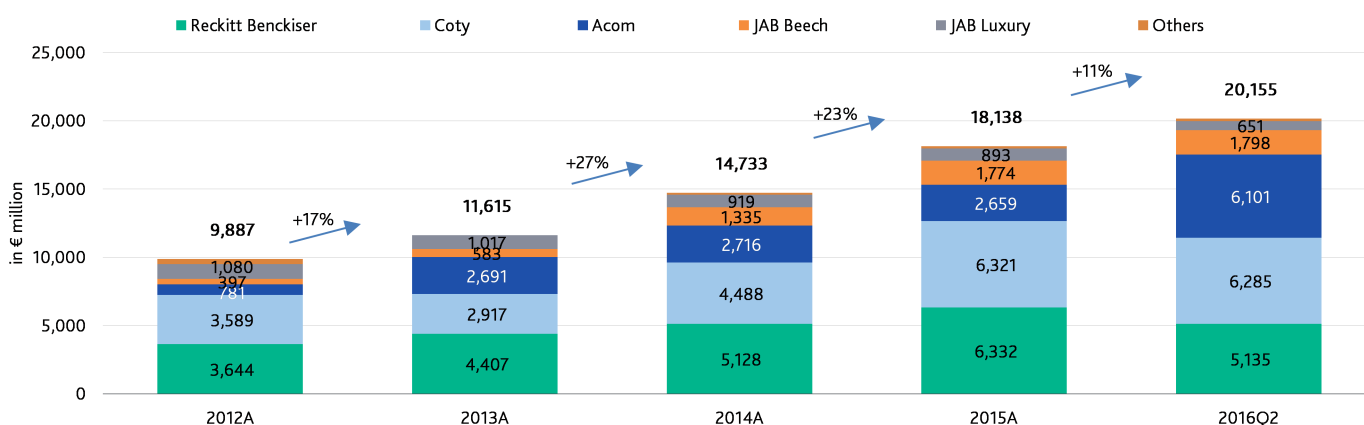
The global diversification of JAB's investments also appears to add a greater degree of stability to performance and market values. However, due to JAB's strategy to acquire businesses domiciled in the US and Europe and then expand into emerging markets once luxury brands have been established, there is a greater concentration in Western markets

Luxury brands is not expected to be a strategic focus and is likely to become an ever smaller portion of the total value of JAB's portfolio. Luxury brands can exhibit strong growth trends but often can be highly dependent on brand and market trends. They do not necessarily allow the company to realise similar synergies as in the company's other businesses.

In our view, JAB's successful strategy is evidenced by the consistent growth in its portfolio value from € 9.9 billion in 2012 to around €20.2 billion as at H1-16 (see Exhibit 3).

Exhibit 3

#### JAB's Growth in Portfolio Value (2012 - H1 2016)



Source: JAB, Moody's Investors Service

### Leverage continues to border our negative rating guidelines, but manageable in near-term given a strengthening portfolio

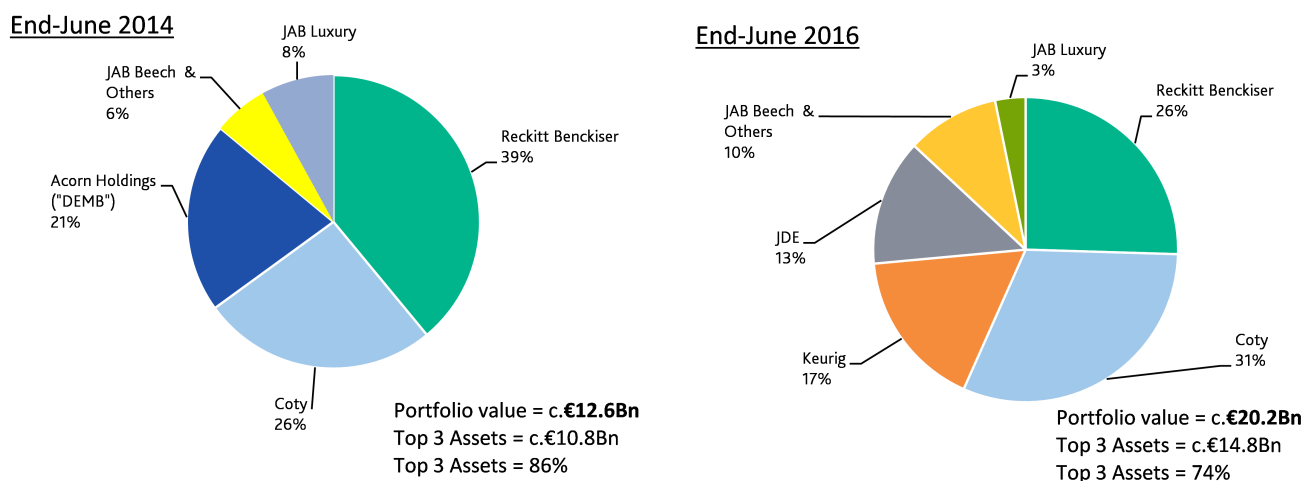
JAB's financial policy is to maintain a maximum net MVL of 25%, although based on discussions with the company, Moody's expects JAB to maintain a net MVL closer to 15%. Owing to consecutive and sizeable M&A activity over the last 12 to 24 months as well as

M&A activity at the investment level, leverage is expected to exceed our expectations. As at 31 December 2016 (FY16) this could be closer to 17% or 18%, given the deterioration in Coty's share price, although this will largely depend on the valuations of the company's unlisted assets

In the near-term we believe the slightly weaker than forecasted leverage is manageable as we expect M&A activity to be value-enhancing and in time, allow for greater dividend distributions. M&A has also helped the company improve its asset diversification and broaden its diversification within the consumer products industry (see Exhibit 4). It has more evenly balanced JAB's exposure to its top three assets, which in the past has been more heavily concentrated on Reckitt Benckiser and Coty. This is a positive development in so far as this limits event risk should Reckitt Benckiser or Coty be impacted by negative, less predictable events. This can lead to material and more permanent market value declines. Smaller bolt-on acquisitions should also allow more regular dividend income from JAB's privately-owned assets such as JAB Beech.

Exhibit 4

#### JAB's portfolio has become more diversified on a sub-sector and asset basis



The valuation of JAB's stakes in JDE and Keurig, which are both held by Acorn Holdings B.V., have been estimated by Moody's, as we understand that Keurig is still valued at acquisition cost.

Source: JAB, Factset, Moody's Estimates

In the medium to longer-term we would expect management to evidence its commitment to a conservative financial policy by managing its portfolio to ensure leverage is closer to our 15% guideline on a more sustainable basis. This would more comfortably position JAB at the Baa1 rating level. This is because our 15% guideline takes into consideration the company's exposure to equity market risk as well as our expectations that M&A activity will continue to form the cornerstone of JAB's investment strategy.

JAB is invested in more defensive industries, which in our view limits market value volatility, but share prices are subjective and market values can fall relatively suddenly. M&A activity increases execution and integration risk, and if JAB or its investments are unsuccessful in their objectives, for example in realizing synergies or strengthening market positions, then this can also negatively impact market values, especially if a high premium has been paid.

To some extent the 15% guideline also factors in the risk related to liabilities of company's Long-Term Incentive Plan ("LTIP"). These are not included in the calculation of MVL but could lead to material cash outflows.

#### Long-term incentive plan with put options expected to constitute lower event risk in the future

As at H1 2016 JAB had liabilities of around \$2.2 billion (2015: \$2.3 billion) in respect of the company's LTIP. LTIP liabilities are excluded from the rating agency's leverage metric calculations, but if they were, net MVL would increase to 27% proforma the Keurig acquisition (FY14: 18%). They are important as the majority of the share options are due to vest beginning of 2017, prior to the maturity of JAB's credit facilities and bonds in 2021, 2022 and 2025.

However, we understand that JAB's management will begin to exercise their options through 2017 and convert these to shares. This is positive as it is further evidence that these are more equity-like in nature. It provides further justification as to our decision to exclude these from our debt calculations.

Moody's has distinguished between JAB's financial debt and the LTIP liabilities given the uncertainty regarding crystallisation of the shares and associated options, including the precise timing and amount which will crystallise. JAB has also always maintained that management would exercise their options and convert these. Moody's considers there to be sufficient conditionality to limit when management may exercise its shares and when the company is obligated to make any payment. This provides the company with sufficient time to manage the company's liquidity. Moody's also draws some comfort from the positive correlation between the value of the LTIP liabilities and the value of the company's investments, as well as the Advisory Committee Members' minimum share ownership requirements.

This scheme enables Advisory Committee members as well as the operational management team (together "the Management Team") to purchase company shares, which are then matched with three options, subject to a vesting period of five years. Both the shares purchased and the associated share options contain put features, which provide the Management Team the right to sell these back to the company for cash. The LTIP liabilities reflect the fair value and potential redemption price of the shares and share options, and in particular, cash potentially owing to the Advisory Committee members.

The LTIP was structured to allow the Management Team to sell their shares and protect the interests of the majority owners, but Moody's understands that the Advisory Committee Members have the intention to convert their options to shares, with a view to increasing their shareholding in JAB and remaining long-term shareholders. The liabilities are deeply subordinated in the event of a bankruptcy and there is no servicing of the liability (coupon or dividend) or cross-default with other debt. The share and option liabilities are not considered as financial debt for the purpose of bank covenants. Nevertheless, the rating captures the financial risk one or more of the Advisory Committee Members leave and exercise their right to have shares and options paid to them in cash.

## Liquidity Analysis

We positively recognize JAB's commitment to maintaining minimum liquidity (cash and undrawn credit lines) of at least €500 million. In FY16 we expect this will be closer to around €2 billion following the refinancing of its RCF in November 2016 and the increase in the facility to €2.6 billion from €2.1 billion. We also positively recognise the extended maturity of JAB's RCF from March 2020 to November 2021, as well as improve pricing and terms.

This level of liquidity is good given there are no material debt maturities until 2021 and available liquidity can sufficiently cover increased interest costs of around €90 million for the foreseeable future. This is important in light of the expected deterioration in the company's interest cover to just under 2.0x. We consider this to be low in the context of JAB's Baa1 rating, as it provides little headroom for a decline in dividend income. Debt maturities in 2021 are sizeable at €1.5 billion (including €760 million drawn under RCF), but we expect these to be refinanced well in advance.

JAB's access to listed investments, (around 59% on a proforma basis compared with c.76% as at H1 2015) further supports the company's financial flexibility in the short to medium-term. However, these primarily reflect JAB's investment in Reckitt Benckiser. We consider involuntary asset sales of stronger performing assets such as Reckitt Benckiser to maintain adequate liquidity, could lead to a deterioration in JAB's asset composition and business profile.

## Structural Considerations

Excluding the guarantor, the intermediate holding companies within the JAB Group and JAB's investments do not provide guarantees to the Issuer of the bonds. The payment of interest and debt at the Issuer is therefore dependent on timely dividends from its investments, the ability to monetize its investments via a disposal or an IPO, and where possible, the upstreaming of cash from majority-owned investments.

All debt is held and raised by the Issuer. The LTIP liabilities are, however, subordinated to the bond and bank debt as these reside at the guarantor, which is the top holding company of the JAB group.

The syndicated RCF is subject to a financial leverage covenant, under which JAB will continue to have ample headroom. While JAB's bonds and the syndicated bank facility are ranked pari passu, a breach of these covenants is not an Event of Default and only requires JAB to prepay the syndicated facilities (not the bonds).

## Profile

JAB Holding Company S.à r.l. (the Guarantor) together with JAB Holdings B.V. (the Issuer) and four wholly owned holding companies, (JAB Cosmetics B.V., Labelux Group GmbH, JAB Forest B.V. and JAB Investments S.à r.l.) form the JAB Group (JAB). JAB is majority-owned by Agnaten SE and Donata Holdings B.V. (together the Family Office).

JAB is a privately held investment holding company, focused on long-term investments in consumer goods and retail companies with premium brands. JAB's key investments in terms of market value include: i) Reckitt Benckiser, a global leader in consumer health and hygiene; ii) Coty (36% voting rights post the merger with The Procter & Gamble Company's fine fragrance, color cosmetics and hair color business), a global leader in fragrances and expanding position in cosmetics and body care; and iii) JDE and Keurig in coffee and tea, which are both held via Acorn Holdings B.V., (58% voting rights).

Besides JDE and Keurig, JAB's coffee and tea business is complemented by its ownership of Peet's Coffee and Tea and Caribou Coffee (both held via JAB Beech Inc., 58% voting rights). JAB also has investments in luxury brands, including listed Jimmy Choo PLC (not rated, 68% of voting rights).

## Rating Methodology and Scorecard Factors

In assessing the credit quality of JAB, we apply Moody's Investment Holding Companies and Conglomerates methodology published in December 2015. The forward view grid-indicated ratings are in line with the Baa1 Issuer Rating assigned.

The forward-looking grids do not explicitly reflect the event risk associated with the LTIP liabilities or JAB's investment strategy, which centers around M&A (both at the holding company and the level of its investments. However, we believe this is partially captured by the credit metric levels we expect JAB to maintain on a sustainable basis. The forward-looking grid assumes that JAB's net MVL will improve to just under 15% within 18 months.

Exhibit 5

JAB Holding Company S.a r.l. -Private			Moody's 12-18 Month Forward View As of 1/31/2017 [3]	
Investment Holding Companies Industry Grid [1][2]	Current FY 12/31/2015		Measure	Score
<b>Factor 1 : Investment Strategy (10%)</b>	<b>Measure</b>	<b>Score</b>		
a) Investment Strategy	Baa	Baa	Baa	Baa
<b>Factor 2 : Asset Quality (40%)</b>				
a) Asset Concentration	Ba	Ba	Ba	Ba
b) Geographic Diversity	A	A	A	A
c) Business Diversity	B	B	B	B
d) Investment Portfolio Transparency	A	A	A	A
<b>Factor 3 : Financial Policy (10%)</b>				
a) Financial Policy	Baa	Baa	Baa	Baa
<b>Factor 4 : Estimated Market Value-based Leverage (MVL) (20%)</b>				
a) Estimated Market Value-Based Leverage	Aa	Aa	Aa	Aa
<b>Factor 5 : Debt Coverage and Liquidity (20%)</b>				
a) (FFO + Interest Expense) / Interest Expense	2.6x	Ba	2x	Ba
b) Liquidity	A	A	A	A
<b>Rating:</b>				
a) Indicated Rating from Grid		Baa1		Baa1
b) Actual Rating Assigned				Baa1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 12/31/2015; Source: Moody's Financial Metrics™

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

## Ratings

Exhibit 6

Category	Moody's Rating
<b>JAB HOLDING COMPANY S.A R.L.</b>	
Outlook	Stable
Issuer Rating	Baa1
<b>JAB HOLDINGS B.V.</b>	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	Baa1

Source: Moody's Investors Service



© 2017 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1058147

## Contacts

Anke Rindermann 49-69-70730-788  
*Associate Managing Director*  
anke.rindermann@moodys.com

Taisiia Alieksieienko 49-69-70730-707  
*Associate Analyst*  
taisiiia.aliexsieienko@moodys.com

Jeanine Arnold 49-69-70730-789  
*VP-Senior Analyst*  
jeanine.arnold@moodys.com

## CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454